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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,079	04/02/2004	Ronald Truelove	70459-013000	2148

7590 05/25/2006

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EXAMINER

CHANG, CHING

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 05/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/817,079

Applicant(s)

TRUELOVE ET AL.

Examiner

Ching Chang

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/21/2006 has been entered.

Drawings

1. The corrected drawing sheets of the objected drawings, as being set forth on the Draftperson's Patent Drawing Review (PTO-948, a copy of which is attached to the Office Action mailed on 06/09/2005), in compliance with 37 CFR 1.121(d), are required to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. ***Claims 1-2, 13, 15-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Yandt (US Patent 2,818,845).***

Yandt discloses a cam follower (between 10 and 11) having a substantially cylindrical form (See Fig. 1), with a cam engaging surface to a base of the substantially cylindrical form and a pushrod (10) engaging surface to the other end, the cam follower being hollow and characterised in that the substantially cylindrical form tapers (See Fig. 1) toward the pushrod engaging surface such that the portion of the cam follower bearing the pushrod engaging surface is substantially conic and substantially hollow; wherein the portion of the cam follower bearing the pushrod engaging surface comprises a frusto conic shape (See Fig. 1); wherein the cam engaging surface is substantially flat or spherical; wherein the pushrod engaging surface comprises a cup; wherein the pushrod engaging surface comprises a ball; wherein an engine valve train comprising the said cam follower (See Fig. 1).

4. ***Claims 1-2, 13, 15-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Cartledge (US Patent 3,809,033).***

Cartledge discloses a cam follower (26) having a substantially cylindrical form (See Fig. 5), with a cam engaging surface to a base of the substantially cylindrical form and a pushrod (10) engaging surface to the other end, the cam follower being hollow and characterised in that the substantially cylindrical form tapers (See Fig. 5) toward the pushrod engaging surface such that the portion of the cam follower bearing the pushrod engaging surface is substantially conic and substantially hollow; wherein the portion of the cam follower bearing the pushrod engaging surface comprises a frusto conical shape (See Fig. 5); wherein the cam engaging surface is substantially flat or spherical; wherein the pushrod engaging surface comprises a cup; wherein the pushrod engaging surface comprises a ball; wherein an engine valve train comprising the said cam follower (See Figs. 4-5).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. ***Claims 1-2, and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speckhart (US Patent 4,173,954) in view of Yandt (US Patent 2,818,845).***

Speckhart discloses a cam follower (20) having a substantially cylindrical form (146, 175), with a cam engaging surface to a base of the substantially cylindrical form and a pushrod (26) engaging surface (176) to the other end, the cam follower being hollow and characterised in that the substantially cylindrical form tapers (170) toward the pushrod engaging surface such that the portion of the cam follower bearing the pushrod engaging surface is substantially conic; wherein the portion of the cam follower bearing the pushrod engaging surface comprises a frusto conical shape (179); wherein the cam engaging surface comprises a roller (148); wherein the pushrod engaging surface comprises a cup; wherein the pushrod engaging surface (176) comprises a ball; wherein an engine valve train comprising the said cam follower (See Fig. 1).

Speckhart discloses the invention as recited above, however, fails to disclose the portion of cam follower bearing the pushrod engaging surface being substantially hollow.

The patent to Yandt on the other hand, teaches that it is conventional in the art of an engine valve operating mechanism, to utilize a hollow and thin walled cam follower (between 10 and 11), in contact with a pushrod (10)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have adopted the application of using the hollow and thin walled cam follower, in contact with the pushrod as taught by Yandt in the Speckhart device, since the use thereof would provide a more light weight cam follower, with less inertia force during the operation.

7. ***Claims 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speckhart in view of Yandt (as applied to claim 1), and further in view of design choice.***

The modified Speckhart device discloses the invention except for the specific length ratio between tapering portion and the cylinder portion, the tapering angle, and the ratio of diameter to length of cylinder portion bearing the cam engaging surface, in the said cam follower.

Since the modified light-weight Speckhart device already maintains the required bending strength during operation, it would have been an obvious matter of design choice, the dimensional variations would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re rose*, 105 USPQ 237 (CCPA 1955).

Response to Arguments

8. Applicant's arguments filed on 04/21/2006 have been fully considered but they are not persuasive.

In response to applicant's argument that the Speckhart reference fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "a cam follower that is substantially hollow throughout a conic portion" (See Page 7, Attorney's Remarks/Arguments)) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).


Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ching Chang whose telephone number is (571)272-4857. The examiner can normally be reached on M-Th, 7:00 AM -5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571)272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

A handwritten signature in cursive script, appearing to read "Ching Chang".

Ching Chang